



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,869	12/16/2003	Scott V. Thomsen	3691-621	5454

23117 7590 07/14/2005

NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

BLACKWELL RUDASIL, GWENDOLYN A

ART UNIT	PAPER NUMBER
----------	--------------

1775

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/735,869

Applicant(s)

THOMSEN ET AL.

Examiner

Gwendolyn Blackwell

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2005.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 34,35,52 and 54 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 34,35,52 and 54 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 26, 2005 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 34-35, 52 and 54 have been considered but are moot in view of the new ground(s) of rejection.

3. The prior art to United States Patent no. 6,312,808, Veerasamy et al is still considered relevant art as the reference teaches the use of ion beam cleaning to remove impurities from the surface of the substrate.

Claim Objections

4. Claim 34 are objected to because of the following informalities:

In claim 34, line 11, the term "whereby" is used. The use of the term "whereby" makes the claim unclear. It is suggested to substitute "wherein" for "whereby". Appropriate correction is required.

5. Claim 52 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. The requirement for a visible

Art Unit: 1775

transmittance of greater than or equal to 70% is already in the base claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 34-35, 52 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent no. 6,492,619 Sol in view of United States Patent no. 6,312,808, Veerasamy et al.

Sol discloses a heatable vehicle windshield comprised of two glass substrates laminated to one another with a low-E coating formed therebetween, (column 3, lines 55-66). The low-E coating has the structure as set forth in Figure 4, wherein the titanium dioxide is the metal oxide and NiCr oxide is the contact layer, (columns 5-7, lines 60-54). The haze for the heat-treated monolithic substrate is 0.15 with a visible transmittance of greater than or equal to 78%, (column 10, Table 4). The haze for the laminated heat-treated structure is less than or equal to 0.3 with a visible transmittance of greater than or equal to 75%, (column 12, Table 5). Sol does not disclose ion beam milling the glass surface located under the low-E coating.

Veerasamy et al disclose a glass substrate that can be used in a windshield, (column 1, lines 56-62), with a coating formed thereon. In order to increase the bonding of the coating to

Art Unit: 1775

the substrate the substrate is first cleaned using an ion beam source, (column 11, lines 65-67). The ion beam source is used to remove impurities from the substrate surface. The action of the ion beam cleaning, which is being held synonymous with ion beam milling and ion beam etching, is physio-chemical in nature. Because of the nature of the interaction of the ion beam source with the substrate surface, the cleaning creates free radicals that can be reacted with other monomers yielding a substrate with specialized properties, (column 12, lines 27-36).

Sol and Veerasamy et al disclose inventions that can be used as automobile windshields. Although, Veerasamy et al do not specify that the ion beam cleaning should occur on the particular surface as exemplified by Applicant, it would have been within the skill of one in the art at the time of invention to modify any surface the glass substrate of Sol with the ion beam cleaning procedure of Veerasamy et al to create an impurity free surface which would increase the adhesion of a coating to the substrate surface without unsightly blemishes that would occur from depositing a transparent coating on a substrate with surface residue.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwendolyn Blackwell whose telephone number is (571) 272-1533. The examiner can normally be reached on Monday - Thursday; 5:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1775

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gwendolyn Blackwell
Examiner
Art Unit 1775


DEBORAH JONES
SUPERVISORY PATENT EXAMINER